

CLAIM AMENDMENTS

A complete listing of the claims of the present application, including those being cancelled herein, together with the required claim status indicators, is set forth as follows:

Claim 1 (original): A method for fabricating a soft ferromagnetic film structure with controlled edge stress anisotropy and enhanced magnetization switching speed, comprising the steps of:

forming a soft ferromagnetic film structure, said soft ferromagnetic film structure having one or more edges exhibiting edge stress anisotropy; and

forming a non-ferromagnetic film structure along said one or more edges to induce stress contributions therein that control said edge stress anisotropy.

Claim 2 (original): A method in accordance with Claim 1 wherein said soft ferromagnetic film structure comprises a transition metal alloy.

Claim 3 (original): A method in accordance with Claim 1 wherein said non-ferromagnetic film structure comprises a material selected from the group consisting of metallic materials and non-metallic materials.

Claim 4 (original): A method in accordance with Claim 1 wherein said non-ferromagnetic film structure is formed to adjust tensile stress generally perpendicularly to said one or more edges of said soft ferromagnetic film structure.

Claim 5 (original): A method in accordance with Claim 1 wherein one or both of said soft ferromagnetic film structure and said non-ferromagnetic film structure are formed using an electroplating process.

Claim 6 (original): A method in accordance with Claim 1 wherein one or both of said soft ferromagnetic film structure and said non-ferromagnetic film structure are formed using a deposition process.

Claim 7 (original): A method in accordance with Claim 1 wherein said soft ferromagnetic film structure comprises a material from the group consisting of alloys of nickel-iron (permalloy), nickel-iron-cobalt alloys, Sendust and alloys of cobalt-zirconium-niobium, cobalt-zirconium-tantalum, and cobalt-iron-boron.

Claim 8 (original): A method in accordance with Claim 1 wherein said non-ferromagnetic film structure comprises a material from a first metal group consisting of palladium, copper and nickel-phosphorus alloy or a second non-metal group consisting of oxides of alumina and oxides of silicon.

Claim 9 (original): A method in accordance with Claim 1 wherein said soft ferromagnetic film structure is a magnetic write head yoke structure.

Claim 10 (original): A method in accordance with Claim 1 wherein said soft ferromagnetic film structure is an MRAM structure or a thin film inductor for RF or microwave circuits.

Claims 11-30 (cancelled).

Claim 31 (new) A method for fabricating a magnetic read/write head transducer, comprising:

forming a yoke from first and second pole pieces extending from a back gap region thereof to a pole tip region and sandwiching an inductive coil;

forming each of said pole pieces with a magnetic domain-controlled, patterned soft ferromagnetic film structure having enhanced magnetization switching speed;

forming non-ferromagnetic film structures along patterned edges of said soft ferromagnetic film structures; and

said non-ferromagnetic film structures being adapted to induce stress contributions in said soft ferromagnetic film structures to control edge stress anisotropy and magnetic domain orientation therein.

Claim 32 (new): A method in accordance with Claim 31 wherein said soft ferromagnetic film structures comprise a transition metal alloy.

Claim 33 (new): A method in accordance with Claim 31 wherein said non-ferromagnetic film structures comprise a material selected from the group consisting of metallic materials and non-metallic materials.

Claim 34 (new): A method in accordance with Claim 31 wherein said non-ferromagnetic film structures are formed to adjust tensile stress generally perpendicularly to patterned edges of said soft ferromagnetic film structures.

Claim 35 (new): A method in accordance with Claim 31 wherein one or both of said soft ferromagnetic film structures and said non-ferromagnetic film structures are formed using an electroplating process.

Claim 36 (new): A method in accordance with Claim 31 wherein one or both of said soft ferromagnetic film structures and said non-ferromagnetic film structures are formed using a deposition process.

Claim 37 (new): A method in accordance with Claim 31 wherein said soft ferromagnetic film structures comprise a material from the group consisting of alloys of nickel-iron (permalloy), nickel-iron-cobalt alloys, Sendust and cobalt-zirconium-niobium alloys.

Claim 38 (new): A transducer in accordance with Claim 31 wherein said non-ferromagnetic film structures comprises a material from a first metal group consisting of

palladium, copper and nickel-phosphorus alloy or a second non-metal group consisting of oxides of alumina and oxides of silicon.

Claim 39 (new): A method in accordance with Claim 31 wherein said soft ferromagnetic film structures define the entirety of said pole pieces.

Claim 40 (new): A method in accordance with Claim 11 wherein said soft ferromagnetic film structures define the pole tips of said pole pieces.

Claim 41 (new): A method for fabricating a disk drive having a housing, a rotatable magnetic recording medium in the housing, an actuator carrying an actuator arm, a suspension, and a magnetic read/write transducer disposed in adjacent relationship with the recording medium, comprising:

forming a yoke from first and second pole piece structures sandwiching an inductive coil;

forming said pole piece structures with magnetic domain-controlled, patterned soft ferromagnetic material having enhanced magnetization switching speed;

forming non-ferromagnetic material along patterned edges of said patterned soft ferromagnetic material; and

said non-ferromagnetic material being adapted to induce stress contributions in said patterned soft ferromagnetic material to control edge stress anisotropy and magnetic domain orientation therein.